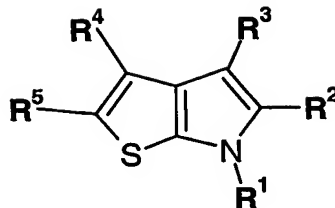


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**CLAIMS:**

1. A compound of Formula (I),



Formula (I)

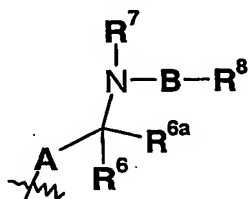
wherein

$R^1$  is selected from: hydrogen, optionally-substituted  $C_{1-6}$ alkyl, optionally substituted

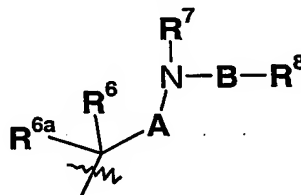
$C_{1-6}$ alkanoyl, optionally substituted aryl or optionally-substituted aryl $C_{1-6}$ alkyl;

$R^2$  is an optionally-substituted mono or bi-cyclic aromatic ring;

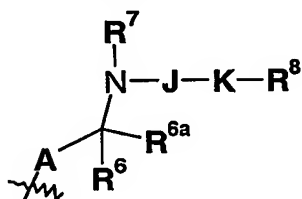
$R^3$  is selected from a group of Formula (IIa) to Formula (IIf):



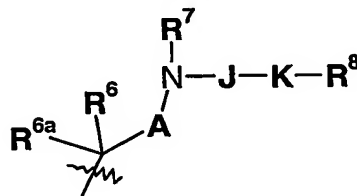
Formula (IIa)



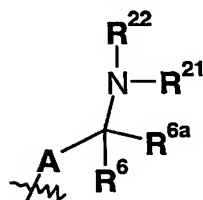
Formula (IIb)



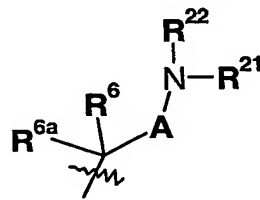
Formula (IIc)



Formula (IId)



Formula (IIe)



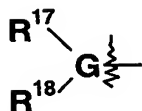
Formula (IIf)

$R^4$  is selected from: hydrogen, optionally substituted  $C_{1-6}$ alkyl, optionally substituted aryl,  $C_{1-3}$ perfluoroalkyl, cyano, nitro, halo,  $R^9O(CH_2)_m$ -,  $R^9C(O)N(R^{10})$ -,

$R^9R^{10}NC(O)N(R^{10})(CH_2)_m$ -,  $R^9S(O_n)(CH_2)_m$ - or  $R^9R^{10}NC(O)-(CR^9R^{10})_l(CH_2)_m$ ;

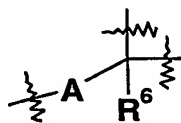
- 198 -

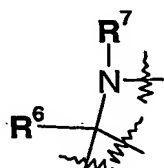
$R^5$  is a group of Formula (III):



Formula (III)

5  $R^6$  and  $R^{6a}$  are independently selected from hydrogen, fluoro, optionally substituted  $C_{1-6}$ alkyl, optionally-substituted aryl or optionally substituted aryl $C_{1-6}$ alkyl, or  $R^6$  and  $R^{6a}$  taken together and the carbon atom to which they are attached form a carbocyclic ring of 3-7 atoms, or  $R^6$  and  $R^{6a}$  taken together and the carbon atom to which they are attached form a carbonyl group;

10 or when A is not a direct bond the group  forms a carbocyclic ring of 3-7 carbon atoms or a heterocyclic ring containing one or more heteroatoms;

or the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

15  $R^7$  is selected from: hydrogen, optionally-substituted  $C_{1-6}$ alkyl, optionally-substituted aryl $C_{1-6}$ alkyl, optionally-substituted aryl, optionally substituted heterocyclyl, optionally substituted heterocyclyl $C_{1-6}$ alkyl,  $R^9OC_{1-6}$ alkyl-,  $R^9R^{10}NC_{1-6}$ alkyl-,  $R^9R^{10}NC(O)C_{1-6}$ alkyl,  $-C(NR^9R^{10})=NH$ ;

or when  $R^3$  is a group of Formula (IIc) or (IId)  $R^7$  is of the formula  $-J-K-R^8$ ;

$R^8$  is selected from:

20 (i) hydrogen,  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl,  $C_{2-6}$ alkynyl, halo $C_{1-6}$ alkyl,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl, hydroxy, hydroxy $C_{1-6}$ alkyl, cyano,  $N-C_{1-4}$ alkylamino,  $N,N$ -di- $C_{1-4}$ alkylamino,  $C_{1-6}$ alkyl- $S(O_n)$ -,  $-O-R^b$ ,  $-NR^bR^c$ ,  $-C(O)-R^b$ ,  $-C(O)O-R^b$ ,  $-CONR^bR^c$ ,  $NH-C(O)-R^b$  or  $-S(O_n)NR^bR^c$ ,  
 25 where  $R^b$  and  $R^c$  are independently selected from hydrogen and  $C_{1-4}$ alkyl optionally substituted with hydroxy, amino,  $N-C_{1-4}$ alkylamino,  $N,N$ -di- $C_{1-4}$ alkylamino,  $HO-C_{2-4}$ alkyl-NH- or  $HO-C_{2-4}$ alkyl-N( $C_{1-4}$ alkyl)-;

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(ii) nitro when **B** is a group of Formula (IV) and **X** is CH and **p** is 0;

(iii) C<sub>3-7</sub>cycloalkyl, aryl or arylC<sub>1-6</sub>alkyl each of which is optionally substituted by **R**<sup>12</sup>, **R**<sup>13</sup> and **R**<sup>14</sup>;

(iv) -(Q)-aryl, -(Q)-heterocyclyl, -aryl-(Q)-aryl, each of which is optionally substituted by **R**<sup>12</sup>, **R**<sup>13</sup> and **R**<sup>14</sup>

wherein -(Q)- is selected from **E**, **F** or a direct bond;

(v) heterocyclyl or heterocyclylC<sub>1-6</sub>alkyl each of which is optionally substituted by up to 4 substituents independently selected from **R**<sup>12</sup>, **R**<sup>13</sup> and **R**<sup>14</sup>;

(vi) a group selected from **R**<sup>12</sup>, **R**<sup>13</sup> and **R**<sup>14</sup>;

**R**<sup>9</sup> and **R**<sup>10</sup> are independently selected from: hydrogen, hydroxy, optionally substituted C<sub>1-6</sub>alkyl, optionally substituted aryl, optionally substituted arylC<sub>1-6</sub>alkyl, an optionally substituted carbocyclic ring of 3-7 atoms, optionally substituted heterocyclyl, optionally substituted heterocyclylC<sub>1-6</sub>alkyl or **R**<sup>9</sup> and **R**<sup>10</sup> taken together can form an optionally substituted ring of 3-9 atoms or **R**<sup>9</sup> and **R**<sup>10</sup> taken together with the carbon atom to which they are attached form a carbonyl group;

**R**<sup>11</sup> is selected from: hydrogen, optionally substituted C<sub>1-6</sub>alkyl, or N(**R**<sup>9</sup>**R**<sup>10</sup>);

**R**<sup>12</sup> is selected from: hydrogen, hydroxy, **R**<sup>17</sup>**R**<sup>18</sup>N(CH<sub>2</sub>)<sub>cc</sub>-, **R**<sup>17</sup>**R**<sup>18</sup>NC(O)(CH<sub>2</sub>)<sub>cc</sub>-,

optionally substituted C<sub>1-6</sub>alkyl- C(O)N(**R**<sup>9</sup>)(CH<sub>2</sub>)<sub>cc</sub>-, optionally substituted C<sub>1-6</sub>alkyl-SO<sub>2</sub>N(**R**<sup>9</sup>)-, optionally substituted aryl-SO<sub>2</sub>N(**R**<sup>9</sup>)-,

C<sub>1-3</sub>perfluoroalkyl-SO<sub>2</sub>N(**R**<sup>9</sup>)-, optionally substituted C<sub>1-6</sub>alkyl-N(**R**<sup>9</sup>)SO<sub>2</sub>-,

optionally substituted aryl-N(**R**<sup>9</sup>)SO<sub>2</sub>-, C<sub>1-3</sub>perfluoroalkyl-N(**R**<sup>9</sup>)SO<sub>2</sub>- optionally substituted C<sub>1-6</sub>alkanoyl-N(**R**<sup>9</sup>)SO<sub>2</sub>-, optionally substituted aryl-C(O)N(**R**<sup>9</sup>)SO<sub>2</sub>-,

optionally substituted C<sub>1-6</sub>alkyl-S(O<sub>n</sub>) -, optionally substituted aryl-S(O<sub>n</sub>) -,

C<sub>1-3</sub>perfluoroalkyl-, C<sub>1-3</sub>perfluoroalkoxy, optionally substituted C<sub>1-6</sub>alkoxy, carboxy, halo, nitro or cyano;

**R**<sup>13</sup> and **R**<sup>14</sup> are independently selected from: hydrogen, hydroxy, oxo, optionally substituted C<sub>1-6</sub>alkyl, optionally substituted C<sub>1-6</sub>alkanoyl, optionally substituted

C<sub>2-6</sub>alkenyl, cyano, nitro, C<sub>1-3</sub>perfluoroalkyl-, C<sub>1-3</sub>perfluoroalkoxy, optionally

substituted aryl, optionally substituted arylC<sub>1-6</sub>alkyl, **R**<sup>9</sup>O(CH<sub>2</sub>)<sub>s</sub>-, **R**<sup>9</sup>(O)O(CH<sub>2</sub>)<sub>s</sub>-,

**R**<sup>9</sup>OC(O)(CH<sub>2</sub>)<sub>s</sub>-, **R**<sup>16</sup>S(O<sub>n</sub>)(CH<sub>2</sub>)<sub>s</sub>-, **R**<sup>9</sup>**R**<sup>10</sup>NC(O)(CH<sub>2</sub>)<sub>s</sub>- or halo;

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$R^{15}$  is selected from: hydrogen, optionally substituted  $C_{1-6}$ alkyl,  $R^{19}OC(O)-$ ,  
 $R^9R^{10}NC(O)-$ ,  $R^9C(O)-$ ,  $R^9S(O_n)-$ ;

$R^{16}$  is selected from: hydrogen,  $C_{1-6}$ alkyl,  $C_{1-3}$ perfluoroalkyl or optionally-substituted aryl;

5  $R^{17}$  is independently selected from: hydrogen, hydroxy, cyano or optionally substituted  $C_{1-6}$ alkyl;

$R^{18}$  is a group of formula  $R^{18a}-C(R^9R^{10})_{0-1}-$  wherein  $R^{18a}$  is selected from:

10  $R^{19}OC(O)-$ ,  $R^9R^{10}NC(O)-$ ,  $R^9R^{10}N-$ ,  $R^9C(O)-$ ,  $R^9C(O)N(R^{10})-$ ,  $R^9R^{10}NC(O)-$ ,  
 $R^9R^{10}NC(O)N(R^{10})-$ ,  $R^9SO_2N(R^{10})-$ ,  $R^9R^{10}NSO_2N(R^{10})-$ ,  $R^9C(O)O-$ ,  $R^9OC(O)-$ ,  
 $R^9R^{10}NC(O)O-$ ,  $R^9O-$ ,  $R^9S(O_n)-$ ,  $R^9R^{10}NS(O_n)-$ , hydrogen, optionally substituted  
 $C_{1-6}$ alkyl, optionally substituted heterocyclyl;  
or  $R^{17}$  and  $R^{18}$  when taken together form an optionally substituted carbocyclic  
ring of 3-7 atoms or optionally substituted heterocyclyl;

15  $R^{19}$  is selected from: hydrogen, optionally substituted  $C_{1-6}$ alkyl, optionally substituted aryl, optionally substituted aryl $C_{1-6}$ alkyl, optionally substituted  $C_{3-7}$ cycloalkyl, optionally substituted heterocyclyl or optionally substituted heterocyclyl $C_{1-6}$ alkyl;

$R^{20}$  is selected from  $R^{12}$  or  $R^{13}$ ;

20  $R^{21}$  and  $R^{22}$  are independently selected from hydrogen, optionally substituted  $C_{1-6}$ alkyl, optionally substituted  $C_{3-7}$ cycloalkyl, optionally substituted heterocyclyl, optionally substituted heterocyclyl $C_{1-6}$ alkyl, optionally substituted  $C_{3-6}$ alkenyl, optionally substituted  $C_{3-6}$ alkynyl,  $-(C_{1-5}alkyl)_{aa}-S(O_n)-(C_{1-5}alkyl)_{bb}-$ ;  
 $R^9R^{10}NC_{2-6}alkyl$ ,  $R^9OC_{2-6}alkyl$  or  $R^9R^{10}NC(O)C_{2-6}alkyl$ , with the proviso that  $R^9$   
and  $R^{10}$  independently or taken together are not optionally substituted aryl or  
optionally substituted aryl $C_{1-6}$ alkyl; or

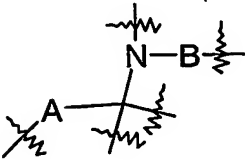
25  $R^{21}$  and  $R^{22}$  taken together form an optionally substituted non-aromatic heterocyclic ring;

A is selected from:

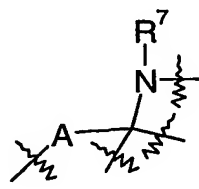
- 30 (i) a direct bond;
- (ii) optionally-substituted  $C_{1-5}$ alkylene wherein the optional substituents are independently selected from: optionally-substituted  $C_{1-6}$ alkyl  
optionally-substituted aryl or optionally substituted aryl $C_{1-6}$ alkyl;
- (iii) a carbocyclic ring of 3-7 atoms;

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- (iv) a carbonyl group or  $-C(O)-C(R^dR^d)-$ , wherein  $R^d$  is independently selected from hydrogen and  $C_{1-2}$ alkyl;

or when  $R^3$  is a group of Formula (IIa) or (IIb), the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

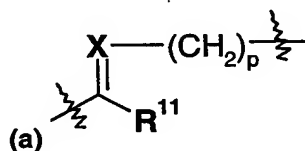
or when  $R^3$  is a group of Formula (IIa), (IIb), (IIc) or (IId), the group



forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

**B** is selected from:

- (i) a direct bond;  
(ii) a group of Formula (IV)



Formula (IV)

wherein:

**X** is selected from N, CH or a saturated heterocyclic ring,

wherein at position (a) Formula (IV) is attached to the nitrogen atom and the  $(CH_2)_p$  group is attached to  $R^8$ ; and

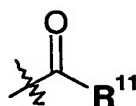
- (iii) a group independently selected from: optionally substituted  $C_{1-6}$ alkylene, optionally substituted  $C_{3-7}$ cycloalkyl, optionally substituted  $C_{3-6}$ alkenylene, optionally substituted  $C_{3-6}$ alkynyl,  $C_{1-6}$ alkoxy,

$(C_{1-5}alkyl)_{aa}-S(O_n)-(C_{1-5}alkyl)_{bb}-$ ,  $(C_{1-5}alkyl)_{aa}-O-(C_{1-5}alkyl)_{bb}-$  or  $(C_{1-5}alkyl)_{aa}-N(R^{15})-(C_{1-5}alkyl)_{bb}$ ,

wherein  $R^{15}$  and the  $(C_{1-5}alkyl)_{aa}$  or  $(C_{1-5}alkyl)_{bb}$  chain can be joined to form a ring;

or the group  $-B-R^8$  represents a group of Formula (V)

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Formula (V);

or the group together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms;

5 or the group forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

**E** is  $-\text{O}-$ ,  $-\text{S}(\text{O}_n)-$ ,  $-\text{C}(\text{O})-$ ,  $-\text{NR}^{15}-$  or  $-\text{C}(\text{R}^9\text{R}^{10})_q-$ ;

**F** is  $-\text{E}(\text{CH}_2)_r-$  or  $-(\text{CH}_2)_r\text{E}-$ ;

10 **G** is selected from: hydrogen, halo, CN,  $\text{NO}_2$ , N, O,  $\text{S}(\text{O}_n)$ ,  $\text{C}(\text{O})$ ,  $\text{C}(\text{R}^9\text{R}^{10})_t$ , optionally substituted  $\text{C}_{2-6}$ alkenylene, optionally substituted  $\text{C}_{2-6}$ alkynylene, optionally substituted heterocyclyl or a direct bond to  $\text{R}^{18}$ ,

**J** is a group of the formula:  $-(\text{CH}_2)_s-\text{L}-(\text{CH}_2)_s-$  wherein when  $s$  is greater than 0, the alkylene group is optionally substituted,

15 or the group together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms;

**K** is selected from: a direct bond,  $-(\text{CH}_2)_{s1}-$ ,  $-(\text{CH}_2)_{s2}-\text{O}-(\text{CH}_2)_{s-}$ ,  $-(\text{CH}_2)_{s1}\text{C}(\text{O})-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{S}(\text{O}_n)-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{N}(\text{R}^{18})-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{C}(\text{O})\text{N}(\text{R}^9)-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{N}(\text{R}^9)\text{C}(\text{O})-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{N}(\text{R}^9)\text{C}(\text{O})\text{N}(\text{R}^9)-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{OC}(\text{O})-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{C}(\text{O})\text{O}-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{N}(\text{R}^9)\text{C}(\text{O})\text{O}-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{OC}(\text{O})\text{N}(\text{R}^9)-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{OS}(\text{O}_n)-(\text{CH}_2)_{s-}$ ,  $-(\text{CH}_2)_{s1}\text{S}(\text{O}_n)-\text{O}-(\text{CH}_2)_{s2}-$ ,  $-(\text{CH}_2)_{s1}\text{S}(\text{O})_2\text{N}(\text{R}^9)-(\text{CH}_2)_{s2}-$ , or  $-(\text{CH}_2)_{s1}\text{N}(\text{R}^9)\text{S}(\text{O})_2-(\text{CH}_2)_{s2}-$ ; wherein the  $-(\text{CH}_2)_{s1}-$  and  $-(\text{CH}_2)_{s2}-$  groups are independently optionally substituted by hydroxy or  $\text{C}_{1-4}$ alkyl;

25 **L** is selected from optionally substituted aryl or optionally substituted heterocyclyl;

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**m** is an integer from 0 to 4;

**n** is an integer from 0 to 2;

**p** is an integer from 0 to 4;

**q** is an integer from 0 to 4;

5 **r** is an integer from 0 to 4;

**s** is an integer from 0 to 4;

**s1** and **s2** are independently selected from an integer from 0 to 4, and

**s1+s2** is less than or equal to 4; and

**t** is an integer from 0 to 4;

10 **aa** and **bb** are independently selected from 0 or 1

**cc** is an integer between 0 to 2;

with the proviso that

(i) when **G** is hydrogen, halo, CN or NO<sub>2</sub> then **R**<sup>17</sup> and **R**<sup>18</sup> are both absent;

15 (ii) when **G** is O, S(O<sub>n</sub>), C(O) or C(**R**<sup>11</sup>**R**<sup>12</sup>)<sub>t</sub> then **G** is substituted by a single group independently selected from the definition of **R**<sup>17</sup> or **R**<sup>18</sup> and when **G** is a direct bond to **R**<sup>18</sup> then **G** is substituted by a single group selected from **R**<sup>18</sup>; and

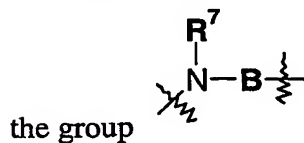
(iii) when **R**<sup>3</sup> is a group of Formula (IIb), **B** is a group of Formula (IV), **R**<sup>8</sup> is selected from group (i) or (ii) above, **R**<sup>11</sup> is a group of the formula N(**R**<sup>10</sup>**R**<sup>11</sup>) and **R**<sup>1</sup>, **R**<sup>2</sup> and **R**<sup>5</sup> are as defined above then **R**<sup>4</sup> cannot be hydrogen;

20 or a salt, pro-drug or solvate thereof.

2. A compound according to Claim 1 wherein **R**<sup>1</sup> is hydrogen.

3. A compound according to Claim 1 or Claim 2 wherein **R**<sup>3</sup> is selected from a group of  
25 Formula (IIa) or Formula (IIb).

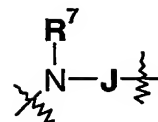
4. A compound according to Claim 3 wherein **B** is optionally substituted C<sub>1-6</sub>alkylene or



forms an optionally substituted C<sub>5-7</sub>heterocyclic ring.

30 5. A compound according to Claim 1 or Claim 2 wherein **R**<sup>3</sup> is selected from a group of Formula (IIc) or Formula (IId).

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6. A compound according to Claim 5 wherein the group together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms

- 5 7. A compound according to Claim 6 wherein **K** is selected from:  $-(CH_2)_s-$ ,  $-(CH_2)_s-O-(CH_2)_s-$ ,  $-(CH_2)_s-C(O)-(CH_2)_s-$ ,  $-(CH_2)_s-N(R^{18})-(CH_2)_s-$ ,  $-(CH_2)_s-C(O)N(R^{18})-(CH_2)_s-$ ,  $-(CH_2)_s-N(R^{18})C(O)-(CH_2)_s-$ ,  $-(CH_2)_s-S(O)_2N(R^{18})-(CH_2)_s-$ , or  $-(CH_2)_s-NHS(O)_2-(CH_2)_s-$ .

- 10 8. A compound according to any one of Claims 3, 4, 5, 6 or 7 wherein **R**<sup>8</sup> is selected from

- (i) hydrogen,  $C_{1-6}$ alkyl,  $C_{2-6}$ alkenyl, halo $C_{1-6}$ alkyl, hydroxy, cyano,  $C_{1-6}$ alkyl $S(O)_n-$ ,  $-O-R^b$ ,  $C_{1-4}$ alkoxy $C_{1-4}$ alkyl,  $-C(O)-R^b$ ,  $C(O)O-R^b$ ,  $-NH-C(O)-R^b$ ,  $N,N$ -di- $C_{1-4}$ alkylamino,  $-S(O)_nNR^bR^c$

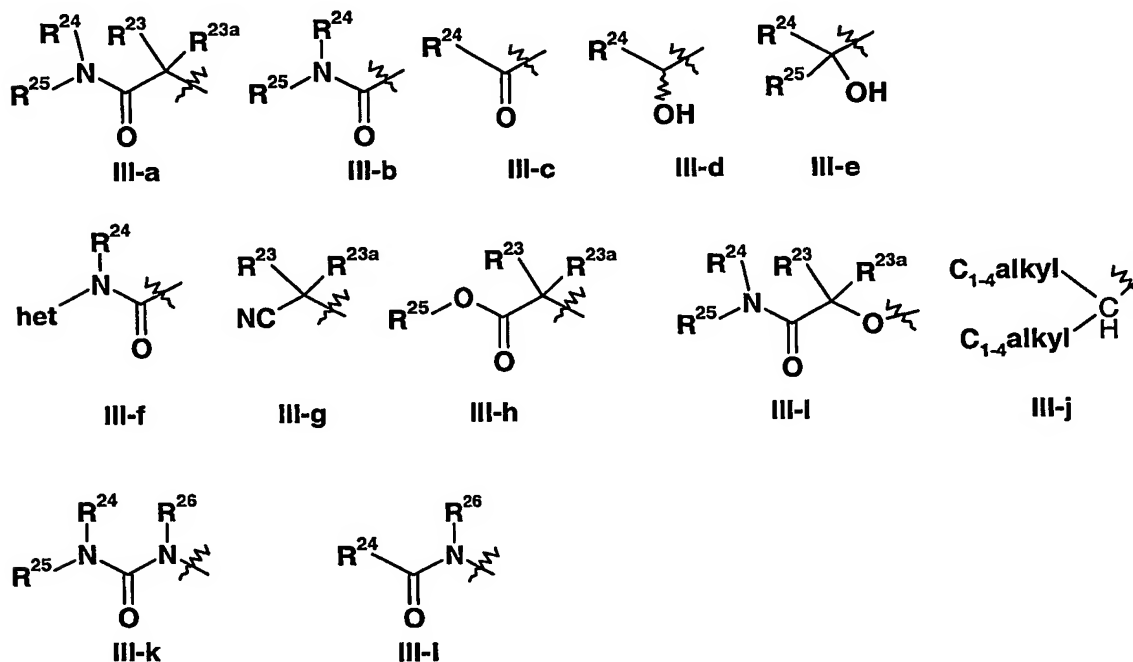
- 15 where **R**<sup>b</sup> and **R**<sup>c</sup> are independently selected from hydrogen and  $C_{1-6}$ alkyl, and **n** is 0, 1 or 2;

- (ii)  $-(Q)$ -aryl;  
 (iii)  $C_{4-7}$ heterocyclyl, or  
 (iv)  $C_{3-7}$ carbocyclyl;



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9. A compound according to any one of the preceding claims wherein  $R^5$  is a group of Formula (III) wherein the group of Formula (III) is selected from one of **III-a** to **III-l**;



wherein:

- 5      **het** represents an optionally substituted 3- to 8- membered heterocyclic ring containing from 1 to 4 heteroatoms independently selected from O, N and S;
- $R^{23}$  and  $R^{23a}$  are independently selected from hydrogen, fluoro or optionally substituted  $C_{1-8}$ alkyl; or  $R^{23}$  and  $R^{23a}$  together with the carbon to which they are attached form an optionally substituted 3 to 7-membered cycloalkyl ring
- 10       $R^{24}$  is selected from hydrogen, optionally substituted  $C_{1-8}$ alkyl, optionally substituted aryl,  $-R^d$ -Ar, where  $R^d$  represents  $C_{1-8}$ alkylene and Ar represents optionally substituted aryl, and optionally substituted 3- to 8- membered heterocyclic ring optionally containing from 1 to 3 further heteroatoms independently selected from O, N and S;
- 15       $R^{25}$  is selected from hydrogen; optionally substituted  $C_{1-8}$ alkyl and optionally substituted aryl;
- or where the group of Formula (III) represents a group of Formula **III-a** , **III-b** or **III-i**, then the group  $NR^{24}(-R^{25})$  represents an optionally substituted 3- to 8- membered heterocyclic ring optionally containing from 1 to 3 further
- 20      heteroatoms independently selected from O, N and S;

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or where the group of Formula (III) represents structure **III-e**,  $R^{24}$  and  $R^{25}$  together with the carbon to which they are attached represents an optionally substituted 3- to 8- membered heterocyclic ring optionally containing from 1 to 4 heteroatoms independently selected from O, N and S;

5  $R^{26}$  is selected from hydrogen or  $C_{1-4}$ alkyl.

10. A compound according to any one of the preceding claims wherein  $R^2$  is selected from an optionally substituted monocyclic aromatic ring structure wherein the optional substituents are selected from cyano,  $NR^eR^f$ , optionally substituted  $C_{1-8}$ alkyl, optionally substituted  $C_{1-8}$ alkoxy or halo wherein  $R^e$  and  $R^f$  are independently selected from hydrogen,  $C_{1-6}$ alkyl or aryl.

11. A compound selected from:

15 2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[1-oxo-2-methyl-2-{4-(1,1-dioxidotetrahydro-3-thienyl)piperazin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;

20 2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-{4-(pyrrolidin-1-ylcarbonylmethyl)piperazin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;

25 2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-{4-(2,4-dioxo-1,2,3,4-tetrahydropyrimidin-6-ylmethyl)piperazin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;

2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-(4-{3-hydroxypyrrolidin-1-ylcarbonyl}piperidin-1-yl)ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;

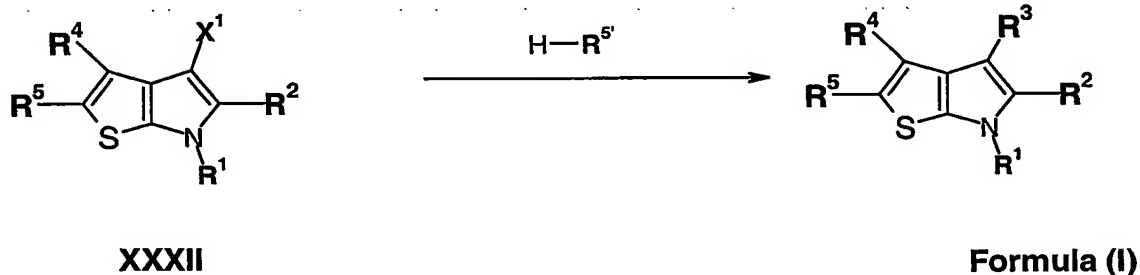
30 2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-(4-{3-oxo-3-pyrrolidin-1-ylprop-2-yl}piperazin-1-yl)ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole; and

2-[2-(1,1-Dimethyl-2-oxo-2-azabicyclo[2.2.1]heptan-7-ylethyl)]-4-[2-(4-{morpholinocarbonyl}piperidin-1-yl)ethyl]-5-(3,5-dimethylphenyl)-6*H*-thieno[2,3-*b*]pyrrole;

or a salt, pro-drug or solvate thereof.

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12. A compound, or salt, pro-drug or solvate thereof, according to any one of Claims 1 to 11 for use as a medicament.
13. A pharmaceutical formulation comprising a compound, or salt, pro-drug or solvate thereof, according to any one of Claims 1 to 11 and a pharmaceutically acceptable diluent or carrier.
14. Use of a compound, or salt, pro-drug or solvate thereof, according to any one of Claims 1 to 11, in the manufacture of a medicament for administration to a patient, for therapeutically treating and/or preventing a sex hormone related condition in the patient.
15. A process of producing a compound, or salt, pro-drug or solvate thereof, according to any one of Claims 1 to 11, wherein the process comprises a reaction step selected from any one of (a) to (i):-
- (a) Reaction of a compound of formula XXXII with a compound of formula  $H-R^{5'}$  to form a compound of Formula (I),



wherein  $X^1$  is selected from:

$$\begin{array}{c} R^{6a} \quad R^{6a} \\ | \quad | \\ C \\ | \\ A \end{array} \quad \text{and} \quad \begin{array}{c} R^{6a} \quad R^{6a} \\ | \quad | \\ C \\ | \\ A-L^1 \end{array}$$

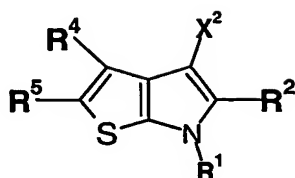
;  $L^1$  is a displaceable group; and

$H-R^{5'}$  is selected from:

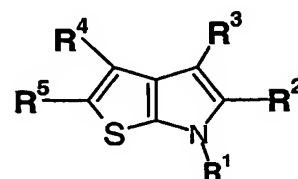
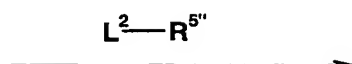
$$\begin{array}{c} R^7 \\ | \\ H-N-B-R^8 \end{array}, \quad \begin{array}{c} R^7 \\ | \\ H-N-J-K-R^8 \end{array} \quad \text{and} \quad \begin{array}{c} R^{22} \\ | \\ H-N-R^{21} \end{array};$$

- (b) Reaction of a compound of formula XXXIII with a compound of formula  $L^2-R^{5''}$  to form a compound of Formula (I),

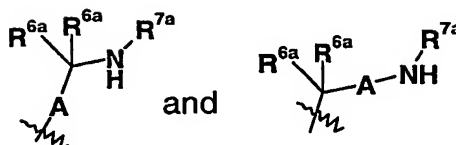
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XXXIII



Formula (I)



wherein  $\text{X}^2$  is selected from:

from the definition of  $\text{R}^7$  or  $\text{R}^{22}$  above, and

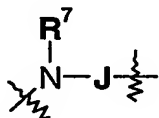
5  $\text{L}^2-\text{R}^{5''}$  is selected from:  $\text{L}^2-\text{B}-\text{R}^8$ ,  $\text{L}^2-\text{J}-\text{K}-\text{R}^8$  and  $\text{L}^2-\text{R}^{21}$ ;

(c) For compounds of Formula (I) wherein  $\text{R}^3$  is a group of Formula (IIa), (IIb), (IIc) or (IId) and  $\text{R}^7$  is other than part of a heterocyclic ring or hydrogen, reaction of a compound of Formula (I) wherein  $\text{R}^3$  is a group of Formula (IIa), (IIb), (IIc) or (IId) and  $\text{R}^7$  is hydrogen with a group of formula  $\text{L}^3-\text{R}^{7a}$ , wherein  $\text{R}^{7a}$  is as defined above for  $\text{R}^7$  with the exclusion of hydrogen and  $\text{L}^3$  is a displaceable group;

(d) For compounds of Formula (I) wherein  $\text{R}^3$  is a group of Formula (IIe) or (IIf) and  $\text{R}^{21}$  is other than hydrogen, reaction of a compound of Formula (I) wherein  $\text{R}^3$  is a group of Formula (IIe) or (IIf) and  $\text{R}^{21}$  is hydrogen with a group of formula  $\text{L}^4-\text{R}^{21a}$ , wherein  $\text{R}^{21a}$  is as defined above for  $\text{R}^{21}$  with the exclusion of hydrogen and  $\text{L}^4$  is a displaceable group;

(e) For compounds of Formula (I) wherein  $\text{R}^3$  is a group of Formula (IIe) or (IIf) and  $\text{R}^{22}$  is other than hydrogen, reaction of a compound of Formula (I) wherein  $\text{R}^3$  is a group of Formula (IIe) or (IIf) and  $\text{R}^{22}$  is hydrogen with a group of formula  $\text{L}^5-\text{R}^{22a}$ , wherein  $\text{R}^{22a}$  is as defined above for  $\text{R}^{22}$  with the exclusion of hydrogen and  $\text{L}^5$  is a displaceable group;

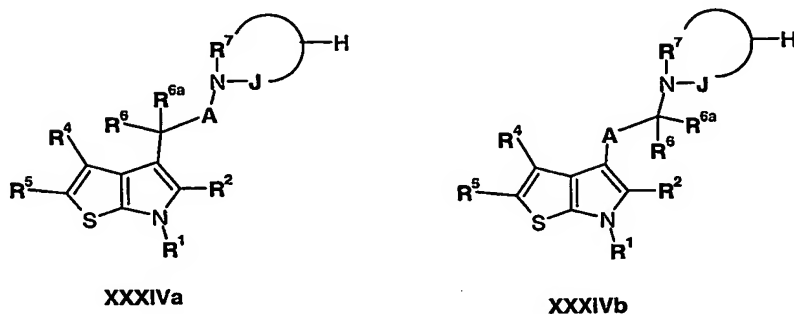
(f) For compounds of Formula (I) wherein  $\text{R}^3$  is a group of Formula (IIc) or (IId) and



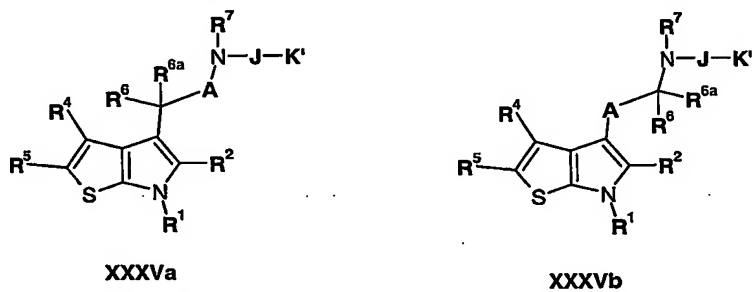
the group together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms, reaction of a compound of Formula XXXIVa or

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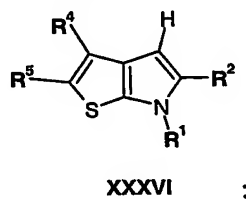
**XXXIVb**, with a compound of Formula **L<sup>6</sup>-K-R<sup>8</sup>**, wherein **L<sup>6</sup>** is a displaceable group



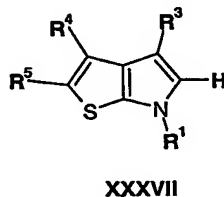
(g) For compounds of Formula (I) wherein  $R^3$  is a group of Formula (IIc) or (IId), reaction of a compound of Formula XXXVa or XXXVb, with a compound of Formula  $L^7-K''-R^8$ , wherein  $L^7$  is a displaceable group, and wherein the groups  $K'$  and  $K''$  comprise groups which when reacted together form  $K$ ,



10 (h) reaction of a compound of Formula XXXVI with an electrophilic compound of the formula  $L^8-R^5$ , wherein  $L^8$  is a displaceable group



(i) reaction of a compound of Formula XXXVII with a compound of the formula  $L^8-R^5$ ,  
wherein  $L^8$  is a displaceable group



and thereafter if necessary:

i) converting a compound of the Formula (I) into another compound of the Formula (I);

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- ii) removing any protecting groups;
- iii) forming a salt, pro-drug or solvate.